

## Reflexive Management of the Professional Formation of Would-Be Teachers

Olga Vladimirovna Gnevek, Lyubov Ivanovna Savva, and Nikolai Yakovlevich Saigushev

Nosov Magnitogorsk State Technical University (NMSTU), RUSSIA.

### ABSTRACT

The reflexive management of the professional formation of would-be teachers means that students develop subjective and personal attitude to the created models, so that the latter acquire some personal meaning. For this purpose, we involved students in the development of the educational content and taught them the methods of creating and solving reflexive-pictographic pedagogical tasks in a simulated situation.

### KEYWORDS

Reflexive Management, Model of Reflexive Management,  
Personal Meaning, Professional Formation,  
Reflexive Management Techniques

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### Introduction

Despite the fact that the issues of the professional formation of would-be teachers have been thoroughly and profoundly investigated, we believe there has been no sufficient research on prerequisites for teachers' professional development and self-development which would involve students' reflection on their own learning experience and the upcoming hands-on teaching. The historical and logical analysis on this issue shows that for many years scientists have not been willing to consider the teacher's reflection as an urgent need of the individual, driven by the nature of the teacher professional development. Only recently, scientists have actively started to raise and examine this issue, to develop the theory and methods of reflexive and active organization of the learning process in higher education. It should be noted that the training of a professional cannot be done effectively without use of reflexive mechanisms which at different stages of social organization contribute to optimization and adjustment of the management processes. In this regard, it is especially important to make adjustments in teaching humanities, particularly pedagogy, after several reforms undermined the methods and forms of how its main sections and topics are presented. This would demand, on the one hand, the implementation of the ideas of cultural congruence and humanization, emphasizing the values which form a individual

**CORRESPONDENCE** Olga Vladimirovna Gnevek  gnevek.olga@yandex.ru

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demanded by the society; on the other hand, it necessitates a new educational paradigm within which one can tackle these issues. Removing this contradiction would enable to update the procedure of the professional formation of a would-be teacher.

The analysis of scientific papers, educational programs and teaching practice shows that some efforts have been made to improve the quality of vocational training of university students. However, even accurate statement of the objective mentioned above and its implementation do not guarantee an adequate result would be reached. By this we mean that such issues as setting the goal and the extent to what it will be achieved have not been clearly stated in pedagogical works (the correlation between stating an objective and how well it was reached), so the results do not always agree with actual tasks, which creates a conflict between the target predictive attitudes of society and the results obtained. This, in turn, leads to a situation when the targets of would-be teachers' training contradict the up-to-date requirements to the final result of this training – the formation of a student capable of self-development. Such contradictions can be resolved by introducing the reflexive management of the students' professional formation. At the same time, the works analyzed by us cover only certain aspects of this problem, which enables us to conclude on the lack of the holistic approach to this issue. Thus, one can clearly see, the society and schools need a teacher capable of self-development and self-fulfillment, whose personal and reflexive mechanisms were formed during study at university, while there has been insufficient research on theoretical and praxeological foundations of the reflexive management. The goal of this management is the professional formation of would-be teachers which would enable intense and purposeful development of these mechanisms.

### Materials and Methods

To achieve the goals set and tasks designed by us as part of the pedagogical experiment, we used a set of complementary methods of scientific and pedagogical research, among which: the methods of theoretical analysis – historiographical, comparative, and retrospective modeling; diagnostic ones – testing, the method of expert estimates, generalization of independent characteristics, questionnaires, interviews, essays, reflection, incomplete sentences, ranking; observational methods – direct, indirect and overt observation of students and teachers' work; praxiometric – analysis of the activity outcomes, study and generalization of the modern pedagogical experience; summative and formative assessment; methods of mathematical and computer processing of data.

### Results

If we consider the training of the future teacher in university in the context of its most important function – management, then it can be seen as the dialectical unity of teaching and self-management of students in various activities aiming to prepare them for successful work with children in future. Reflexive management implies the development of a new, more effective educational technology. The development of educational technology in higher education, in our opinion, does not exclude, but means reliance on evidence-based guidelines. However, the emphasis is still placed on methods, and especially on the development of pedagogical management tools and self-management of students taking into account their major (Saigushev, 1997; Saigushev, 2016).

At the same time, one should keep in mind that reflexive management is successful as long as one understands that “the management authority and the system managed are active parties” and that management is integral interrelated activity (Novikov, 2009).

The guiding principle of reflexive management of the professional formation of would-be teachers is the enrichment principle, which means the implementation of the principles of the leading approaches to the management and using the mechanisms in the context of the set goal – the improvement of the professional formation of would-be teachers.

The reflexive approach to the management of the professional formation of would-be teachers enables to “unite into a single knot” the problem-oriented, research, systemic, cultural, personal, optimization, situational and synergistic approaches.

The developed reflexive management model of the professional formation of the would-be teacher includes a number of interconnected blocks:

- the target block that covers the structure and the content of the professional formation of would-be teachers, as well as a set of strategic, tactical and operational objectives;

- the meaning and technological block that includes techniques for intensifying the training (the method of reflective and functional analysis of teaching; the method of verbal and figurative representation of pedagogical objects; the reflective and pictographic method of task-based training; method of games);

- the organizational and executive block dealing with the types of teacher and students interaction and the stages of reflective management in the professional formation of the would-be teacher;

- the information and diagnostic block comprising the database of information on the basic functions of the reflexive management, external and internal communications links, as well as the diagnostic program of the students' professional development.

We can define the reflexive management of the professional formation of would-be teachers as the management, aimed at a targeted, flexible and efficient interaction of the teacher with students, which is formed as a result of a phased transformation of the teacher's “superposition” and the subordinated position of the student into equal positions of cooperating individuals by implementing reflexive principles and methods of intensifying training.

Let us consider methods intensifying student learning. We carried out this transition from pedagogical management into self-government of students and the intensification of educational and creative activity of students in the pedagogical workshop (Saigushev 1997; Saigushev, 2000; Saigushev, 2016).

Classes in the educational workshop at the Art and Graphic Department gradually evolved into scientific work, while pedagogical management, as mentioned before, was done in accord with students' self-government. This educational workshop proved it is possible to organize psychological and pedagogical support during the transition of management into self-management by a teacher turning into a coordinator of his activity, an actor. One of the results of our educational workshop was creation of teaching aids carried out by all parties (Saigushev 1997; Saigushev, 2000).



As it was noted, “the cause of self-actualization is, above all, the availability of natural talents and abilities. Next, there is a need for self-actualization generated by goal-setting system, personal meanings and appropriate motivation” (Mazhar, 1996). In this paper we consider the professional formation of the students of the Art and Graphic Department, for whom the natural talent for drawing is a prerequisite for mastering their job. Applicants to the Art and Graphic Department pass specific tests by which the board evaluates their aptitude for drawing. Thus, the need for self-actualization results, on the one hand, from their own potential, and on the other hand, from the education and training system.

Some scientific publications (Nemensky, 1996) suggest bipolar didactics – the didactics of science education and art. While the didactics of scientific knowledge is linked to the rational-logical learning of the world, with knowledge and skills as the well-established criteria of this, the didactics of art deals with a specific area of learning about life – the art. Its subject is the emotional and value attitude to all life phenomena. The method of sharing this experience is also very subjective – through individual experiences. After many years of working with the students of the Art and Graphic Department, we can conclude that they most often operate the artistic sphere of knowledge, the emotional and value attitude to the world around them.

## Discussion

During the experimental part of the research we focused on developing the students inclination to “apply the features that they potentially had” and included the subjective experience (personal meanings) of the would-be teacher in the course of training (Maslow, 1982). Teaching students the methods of preparation and synthesized solution of reflexive and pictographic pedagogical tasks in a simulated situation and in a real professional and pedagogical practice, we aimed to form the following skills: the ability to professionally create a drawing with an educational task; the ability to depict pedagogical tasks and the problem situation through a drawing; the ability to represent in a picture the professional and pedagogical issues; the ability to represent by means of a drawing and through pedagogical tasks the social situations arising when teaching schoolchildren; the ability to express in a drawings the goals of school and social development; the ability to reflect in a drawing the contradiction of the pedagogical situation; the ability to convey various pedagogical concepts, ideas, beliefs, teaching practices by means of a drawing; the ability to represent the structure of vocational and educational activities in a drawing; the ability to represent the reflective and functional analysis of teaching in a drawing; the ability to express their individual creative style in a drawing.

As our experimental work showed, the implementation of subjective experience (personal meanings) in the course of future teachers training became more effective after including the subjective path of experience sharing – the personal “living through”.

In our work, we adopted the conceptual idea that implies the relationship between the models created by the students and their personal meanings – the idea of D.A. Leontev (1988). In the course of the reflexive management of the professional formation of students at the Art and Graphic Department they developed subjective personal attitudes to the drawings representing the created

models and which became important for the actor, filled with some personal meaning. This concept was adopted when students were designing the content of their pedagogical subjects by modeling and when we taught students the methods of preparation and synthesized solution of reflexive and pictographic pedagogical tasks in a simulated situation and in a real professional and pedagogical practice.

When creating reflective and pictographic pedagogical problems (Saigushev, 1997), the students were modeling problem and conflict situations which contained certain professional difficulties, objectively existing in real education, and which require would-be teachers to be aware of their professional functions, and in accord with them, ability to choose correctly the methods, techniques, solutions, and the revision of their own behavior and relationships.

We attempted an analytical study of pedagogical courses, without increasing the hours allocated for studying them. In the course of creative work, the content of the subjects such as Introduction into Teaching, Didactics, Theory of Education, History of Education became subjectively meaningful, as the students filled them with personal meanings. This experimental work has contributed to conscious analytical mastering of the content of pedagogical subjects.

Students design of the contents of their pedagogical subjects by modeling and teaching them the methods of preparation and synthesized solution of reflexive and pictographic pedagogical tasks in a simulated situation and in a real professional and pedagogical practices became the prerequisites for psychological and pedagogical support which allowed transforming the management of the professional formation of a would-be teacher into self-management.

We consider the professional formation of students in higher education as the unity of their teaching and learning, simulation and modeling, professional and practical activities in accord with the domestic psycho-pedagogical activity theory. Educational and learning activities of students were aimed at comprehension of theoretical knowledge. This was facilitated by such tasks as writing essays on topical issues of pedagogy and their presentation, students writing mini-essay-reflections, the study of pedagogical works, pedagogical periodical press and analyzing these sources (Saigushev, 1997; Savva, 2008; Kayumova, 2016).

We also found it viable to use the application method at the lectures on pedagogical subjects. The essence of this method is students' participation in giving a lecture together with the teacher. We asked students questions after pedagogical lectures. For example, was the material presented in this lecture clear?; Was the lecture content thought-provoking?; Is it necessary to include problem situations in the lecture content?; Did the teacher include problem situations in the lecture?; Have you learned anything new from the lecture?; Did you like how the teacher interacted with the audience?; What recommendations could you give to the teacher? This work, carried out systematically, convinced us that it facilitates the formation of a reflective and co-creative type of a student.

We found out that the students in the experimental group had significantly developed their theoretical and analytical skills. These skills clearly manifested themselves when the students were analyzing theoretical pedagogical materials or literary works and pedagogical periodicals.

Our training program simulates future professional activities by designing such training tasks, so that would-be teachers find themselves in a situation



where they have to ponder on the content of teaching job and their place in it, and decide how they are going to act.

During the experiment we aimed to bring training conditions closest to the conditions of future professional activities, which would allow students to become active parties, and so that they could practice, study, analyze and evaluate different aspects of their professional activities, their content, contradictions, and difficulties.

Performing these activities, simulating their professional ones, would-be teachers had a real opportunity to develop their professional role; they acquired goals, motives, values, made plans, predicted results, analyzed, monitored, evaluated, thus mastering their future profession. We also observed that in the experimental group, students could practice professional regulation of their behavior in some case studies.

Practical classes and pedagogical workshops included tasks presented in the form of various games, educational contests, collective creative tasks, episodes of teaching, speaking in public, designing, solving, analyzing and self-evaluating the reflexive pictographic pedagogical problems that were used as a kind of a "simulator" for methodological, theoretical, practical and reflective training of would-be teachers. Using that educational task as a training model, students of the Art and Graphic Department could develop their ability to analyze and evaluate their actions.

Would-be teachers can practice their vocational and practical activities after the third year of study. We consider the student teaching as the key factor in terms of preparation for future job; that is why it should be seen as a crucial condition for the teachers' professional development and an efficient way of forming professional-pedagogical skills.

The transition from the management of professional formation of a would-be teacher's personality into self-management was implemented by means of play activities. This transition, as some researchers state (Game modeling, 1987), is best done by using games in learning due to the following specifics of the game:

- the game allows creating the structure and functional units of the future job. In the context of our research, this means that the game enables to simulate in learning the real conditions which generate the professional needs to learn and practically apply this knowledge and stimulate students' activity and the transition from the cognitive motivation to the professional one;

- the game enables the transition to self-organization and self-management of actions and activities by students themselves. In the context of our research, this means a further improvement of the students' ability of self-management.

The pedagogical games we organized included the following interrelated methodological stages: defining a problem situation based on the collision of alternative points of view; a student "living through" a problem situation when playing a game; summing up the game outcome, participants evaluating their performance; feedback on the process and outcome of the game and experience of the participants, the analysis of the problem situation.

Integrating games in learning, we took into account the fact that would-be teachers can perceive and internalize the pedagogical knowledge, skills, as well as understand the teaching functions only at the cognitive level. Emotions play a significant role here (Savva, 2015; Savva, 2008).

Our observations showed that when playing a game, the participants generated the field of positive emotions and trust, where students could improve their theoretical knowledge on how to develop the creative potential of pupils, could form and develop the appropriate pedagogical skills, learn to analyze and evaluate their own actions.

The use of pedagogical games as an integrative method of reflexive management of the professional formation, as the experiment proved, boosted the cognitive activity of students, developed their skills of working with children, updated their analytical and reflection skills, increased students awareness of their future job in modern school, and of specific situations dealing with training and education of pupils.

### Conclusion

The findings of the study allowed us to identify systemic principles of the reflexive management of the professional formation of would-be teachers, to improve the basic provisions of the concept and the methodology of its implementation. The second line of the experiment included the verification and implementation of the main provisions of the concept in the professional training of would-be teachers and teacher advanced training. The statistical data obtained by us from the pedagogical experiment showed that the praxeological support of the reflexive management of the professional development we created was generally efficient for all new components of the would-be teacher's personality, although the development of particular components occurred at different pace depending on what intensified technologies were emphasized in learning, as well as taking into account the selected pedagogical conditions. The results of the experimental group confirmed our hypothesis that in case the main provisions of the reflexive management of the professional formation of the would-be teacher are comprehensively implemented, one can see a more dynamic and stable improvement, as well as it contributes to students reaching a higher level of performance compared to the control group.

This research addresses a current issue of finding effective mechanisms for reflexive management of students in higher education. The study determined the theoretical and praxeological foundations of the reflexive management of professional formation of would-be teachers. Having analyzed philosophical, psychological and pedagogical works, we developed the concept of reflexive management of the professional formation of would-be teachers by means of intensifying technologies with both parties of the learning process being active. This approach enables a qualitative transformation of teaching in higher education and forms the basis for the analysis and design of the reflective model of professional teacher training.

In this study, we designed a conceptual and content model of the reflexive management of the professional formation of would-be teachers which integrates the target, content-technological, information-diagnostic, and organizational-executive blocks, ensuring the praxeological aspect of improving the efficiency of reflexive management of training in higher education.

It was found that one can apply the conceptual model of the reflexive management of the professional formation of the would-be teacher if the interaction includes a purposefully initiated dialogue and there are conditions for cooperation, which enables a positive development and transformation, creates



favorable conditions for the formation of students' personal traits. In this situation, they learn to operate independently and enrich their personal experiences. The effectiveness of reflexive management of the professional formation of the would-be teacher depends on the inclusion of the subjective experience of students, active use of their personal meanings in the course of learning.

We identified ways of improving the professional-pedagogical training of students, so that its comprehensive implementation makes the reflexive management of the professional formation of would-be teachers efficient. Having studied the pedagogical theory and educational practices, we proved and experimentally confirmed the need to integrate simulation tasks into the content of university subjects, to use simulation as a method of acquiring scientific knowledge and the method of reflexive management of the professional formation of would-be teachers.

As part of the experiment, we designed the content of pedagogical subjects and created a variety of models containing visual images which perform specific interrelated functions in the structure of the vocational teacher training: a cognitive-informative function, through which the student as an actor acquires traits and qualities of the would-be teacher's personality, the structure of teaching; a regulative function (management) that facilitates the reflexive management of the professional formation of the would-be teacher. Visual images are an important prerequisite for summing-up and generalization of pedagogical knowledge, which deals with an empirical function; visual images may partially perform functions of the language, becoming a kind of means for the expression of an abstract educational thought – an ideographic function; visual images become essential elements for the interpretation of the content of formal semiotic systems – an interpretative function; visual-image formations can serve as a means of obtaining new knowledge about the subject of pedagogy, history of pedagogy and future educational activities – a heuristic function. And, finally, the specific feature of our visual models as a form of students training is the combination of two interrelated functions: an image and a symbol, symbolization, which allows our model to carry a kind of generalized educational idea. In addition, it is proved that reflective-pictographic pedagogical tasks, prepared by students under the teacher's supervision are effective in terms of the reflexive management of the professional formation of would-be teachers.

Considering the findings of the experiment and meeting one of the research objectives, in line with our concept, we and the students developed intensifying technologies and implemented them in the practice of teaching at pedagogical universities. These technologies aimed to ensure the effective reflexive management of the professional formation of would-be teachers. The outcome of our work was creation and publication of the collection of pictographic reflective-pedagogical tasks; some manuals on pedagogy, history of pedagogy and education; guidelines for schools. All this equipped the would-be teachers with skills necessary for reflexive management.

Thus, the findings of the experiment confirmed the hypothesis that the reflexive management of the professional formation of would-be teachers is efficient if: one takes into account the nature of the professional development as an evolving, self-organizing system; one implements a conceptual-content model of reflexive management; there is a unity of methodological, theoretical, practical

and reflective training of would-be teachers in teaching and learning, professional simulation and modeling activities, as well as hands-on teaching; one creates a set of estimated and proven pedagogical conditions.

### Disclosure statement

No potential conflict of interest was reported by the authors.

### Notes on contributors

**Olga Gnevek**, D. Sc. in Pedagogics, Professor, Director of the Institute of Humanitarian Education, Nosov Magnitogorsk State Technical University (NMSTU).

**Lyubov Savva**, D. Sc. in Pedagogics, Professor of the Department of Education Science, Institute of Humanitarian Education, Nosov Magnitogorsk State Technical University (NMSTU).

**Nikolai Saigushev**, D. Sc. in Pedagogics, Professor of the Department of Education Science, Institute of Humanitarian Education, Nosov Magnitogorsk State Technical University (NMSTU).

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